AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising the steps of:

designating said first router as a primary router by using said IRDP to assign said first router a first preference value which said first router includes in advertisements it sends out to said host on said network;

designating said second router as a backup router by using said IRDP to assign said second router a second preference value which said backup router includes in advertisements it sends out to said host on said network;

causing said host to transmit data over said network to said primary router subsequent to receiving an advertisement from said primary router;

in the event said host does not receive an advertisement from said primary router within a predetermined time period, causing said host to recognize an advertisement from said backup router and to treat said backup router as a primary router, and to transmit data to said backup router, whereby said backup router routes said data received from said host over said network to a desired destination; and

using a <u>packet</u> filter with said host to prevent receipt of an advertisement from a <u>new</u> router, other than said primary router or said backup router, <u>regardless of a</u> <u>preference value advertised by said new router, such that only a router</u> that is pre-authorized to act as a primary router <u>may be potentially selected as a primary router</u>.

2.   (previously presented) The method of claim 1, wherein:

a plurality of said backup routers are provided, each of said backup routers being in communication with said host on said network and each being assigned a preference value; and

further comprising said host using said backup router that has the highest preference value when said primary router fails.

3.   (previously presented) The method of claim 1, further comprising blocking the reception of Type 9 and Type 10 ICMP packets transmitted on said network to said host by any router operating on said network.

4.   (previously presented)   The method of claim 1, further comprising configuring said primary router to receive data packets from a plurality of independent computing devices.

5.   (previously presented)   A method for re-configuring communications between a host and a plurality of routers communicating sending advertisements to said host on said network, wherein said routers and said host are all operating on an Internet

Control Message Protocol (ICMP) router discovery protocol (IRDP), the method comprising:

configuring said host for communication with a plurality of personal computing devices;

causing said host to recognize a first one of said routers which transmits an advertisement which includes an address having the highest preference value of all of said routers as a default router;

in the event said default router ceases transmitting advertisements on said network for a given period of time, causing said host to remove said first one of said routers as said default router from a routing table maintained by said host;

causing said host to recognize said router having the next highest preference value in its advertisement, as a secondary default router, and designating said secondary default router as a new default router in said routing table of said host; and

in the event said secondary default router ceases transmitting advertisements for a given period of time while said first one of said routers has also ceased transmitting advertisements, then causing said host to recognize said router transmitting advertisements having the next highest preference value to that of the secondary router as a tertiary router, and designating said tertiary router as said default router in said routing table of said host; and

using a packet filter with said host to prevent receipt of an advertisement from a router not pre-authorized to act as a primary router.

6.   (cancelled)

7.   (previously presented) The method of claim 5, wherein using at least one packet filter comprises blocking the receipt by said host of any advertisement transmitted to it on said network which comprises one of a Type 9 and a Type 10 packet to insure against the diversion of data packets transmitted from said host to an authorized router transmitting advertisements on said network.

8.   (currently amended)   A method for re-configuring communications between a host and a plurality of routers communicating sending advertisements to said host on said network, wherein said routers and said host are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising:

configuring said host for communication with a plurality of personal computing devices;

causing said host to recognize a first one of said routers which transmits an advertisement which includes an address having the highest preference value of all of said routers as a default router;

in the event said default router ceases transmitting advertisements on said network for a given period of time, causing said host to remove said first one of said routers as said default router from a routing table maintained by said host;

causing said host to recognize said router having the next highest preference value in its advertisement, as a secondary default router, and designating said secondary default router as a new default router in said routing table of said host;

in the event said secondary default router ceases transmitting advertisements for a given period of time while said first one of said routers has also ceased transmitting advertisements, then causing said host to recognize said router transmitting advertisements having the next highest preference value to that of the secondary router as a tertiary router, and designating said tertiary router as said default router in said routing table of said host; and

using at least one packet filter on said host to restrict the advertisements said host can receive on said network <u>and, thus, prevent a possibility of a router that is not pre-authorized from successfully advertising itself as a new default router</u>.

9.   (previously presented) The method of claim 8, wherein the step of using at least one packet filter comprises blocking the reception by said host of all Type 9 data packets transmitted to it on said network.

10.   (previously presented) The method of claim 8, wherein using at least one packet filter comprises blocking the reception by said host of all Type 10 data packets transmitted to it by said network.

11.   (previously presented)   A method for re-configuring communications between a host, a first router and a second router on a network in the event of a failure of the first router, wherein the host, first router and second router are all operating on an Internet Control Message Protocol (ICMP) Router Discovery Protocol (IRDP), the method comprising:

designating said first router as a primary router by using said IRDP to assign said first router a first preference value which said first router includes in advertisements it sends out to said host on said network;

designating said second router as a backup router by using said IRDP to assign said second router a second preference value which said backup router includes in advertisements it sends out to said host on said network, said second preference value being less than said first preference value;

causing said host to transmit data packets on said network to said primary router subsequent to receiving an advertisement from said primary router;

in the event said host does not receive an advertisement from said primary router within a predetermined time period, causing said host to recognize an advertisement from said backup router and to treat said backup router as a primary router, and subsequently transmit data to said backup router in lieu of said first router, whereby said backup router routes said data received from said host over said network to a desired destination; and

using a filter on said host to restrict the types of advertisements said host may receive to thereby eliminate the possibility of an unauthorized router that has gained access to said network transmitting advertisements that cause said host to recognize said unauthorized router as said default router.

12.   (previously presented) The method of claim 11, wherein using a filter comprises blocking all Type 9 advertisement packets transmitted on said network.

13. (previously presented) The method of claim 11, wherein using a filter comprises blocking all Type 10 advertisement packets transmitted on said network.